Assessment Project Based on Survey Data

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OUTLINE

- Executive Summary
- Introduction
- Methodology
- Results
  - Visualization – Charts
  - Dashboard
- Discussion
  - Findings & Implications
- Conclusion
- Appendix

EXECUTIVE SUMMARY

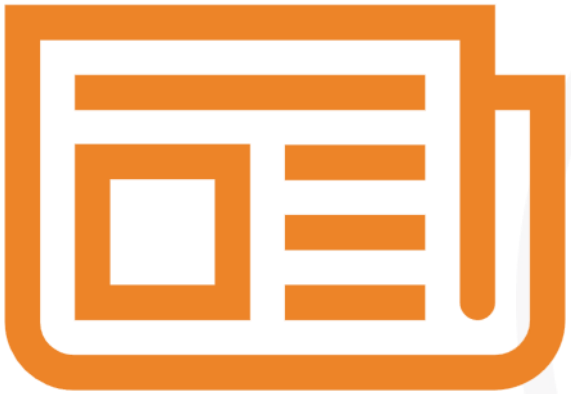
- Visualization of PROGRAMMING LANGUAGE TRENDS
- Visualization of DATABASE TRENDS
- DashBoard of Current Technology Usage
- DashBoard of Future Technology Trend
- DashBoard Demographics
- Visualization of Jobs Posting
- Visualization of POPULAR LANGUAGES

INTRODUCTION

- *Target Audience*
  - Aspiring and professional developers
  - Decision-makers in tech strategy
  - Hiring managers and recruiters

- *Value Provided*
  - Highlights the most in-demand and emerging technologies
  - Helps guide learning paths and career planning
  - Informs recruitment and upskilling strategies
  - Supports tech stack decisions for modern projects

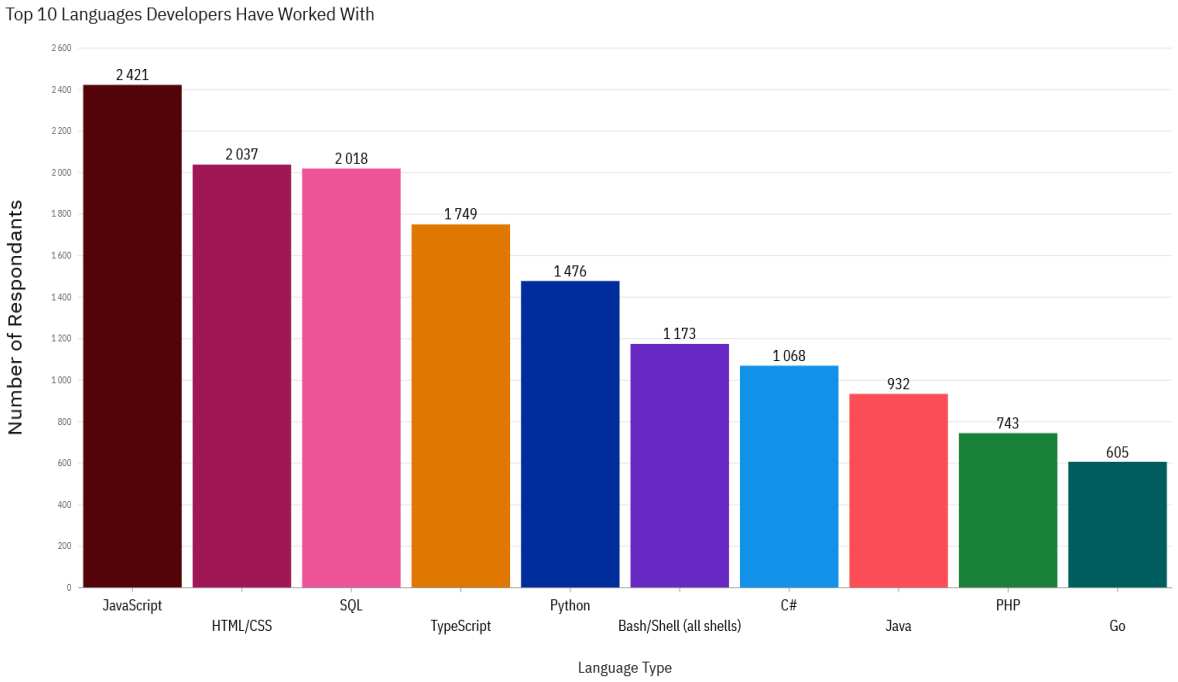
METHODOLOGY



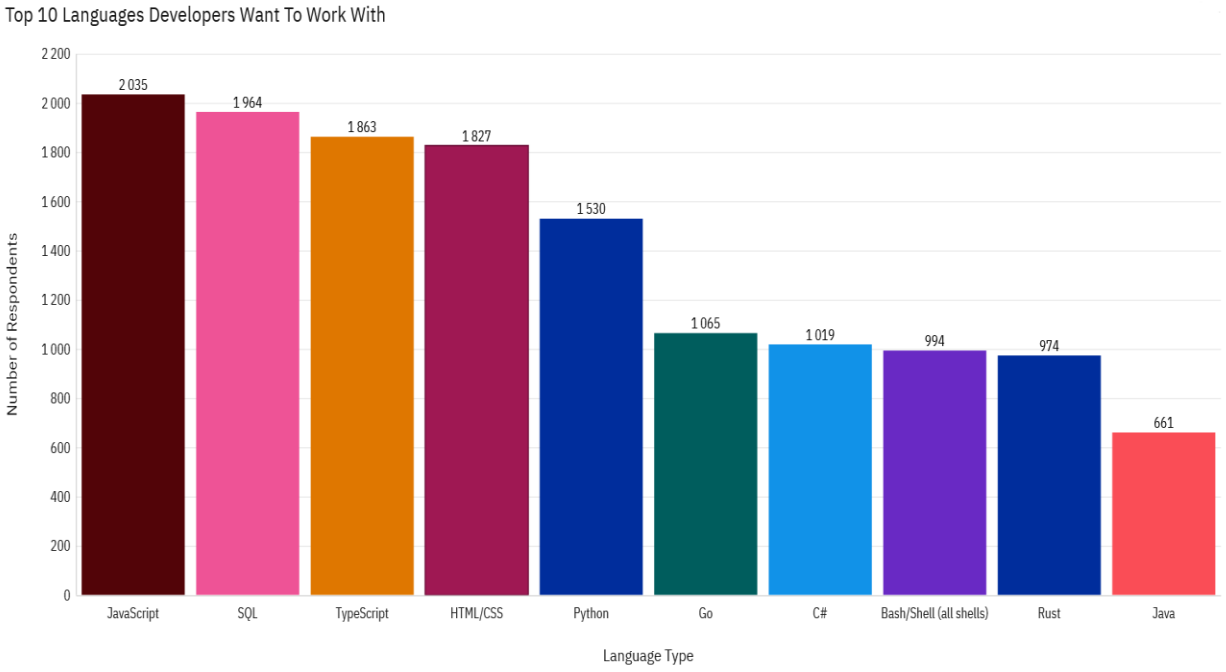
- *Sources* :
  - Developer survey data sourced from the **web** using **web scraping** techniques.
- *Collection and Tools* :
  - **Python** was used for:
    - Web scraping (via libraries such as requests, BeautifulSoup)
    - Data import and manipulation with pandas (pd.read_csv)
- *Analysis & Visualization* :
  - The final dashboard and visualizations were created using **IBM Cognos Analytics**.
  - Data was transformed into charts (bar charts, word clouds, treemaps, bubble charts) for clearer insights.
  - Data wrangling included filtering top 10 items, renaming columns, handling nulls, and formatting counts.

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

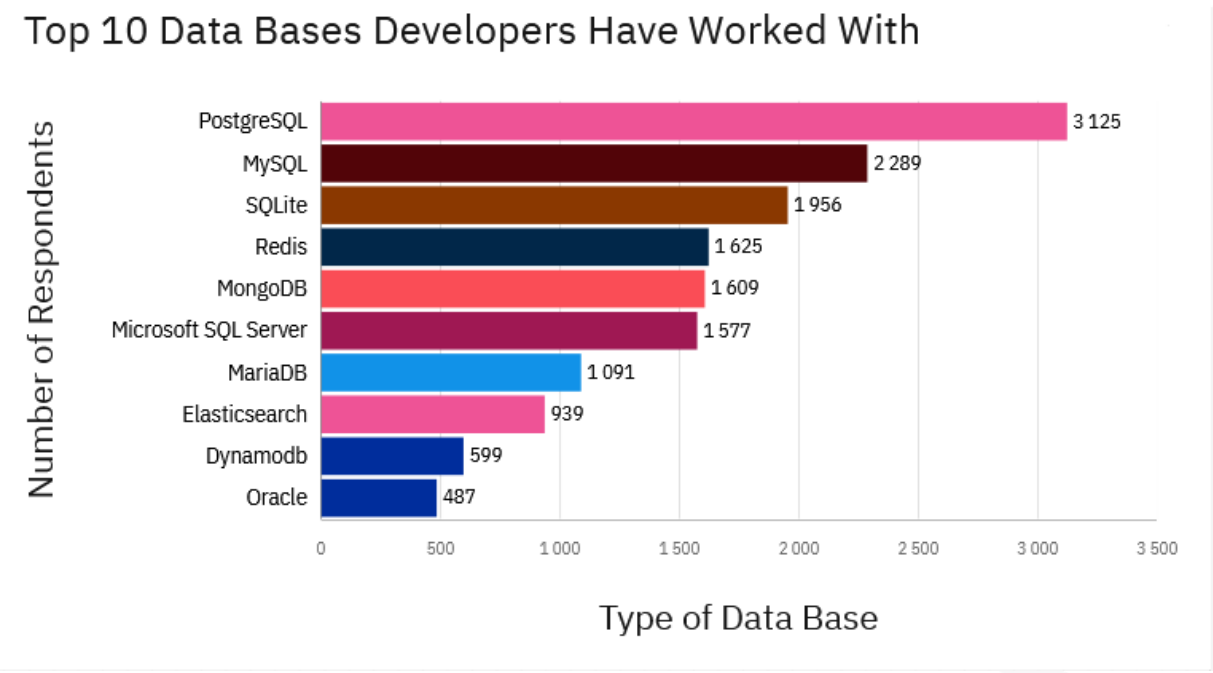
- JavaScript is still #1 in usage and interest
- Rust is desired but not yet widely used
- PHP and Java rank lower in future interest
- Go and TypeScript are gaining attention

Implications

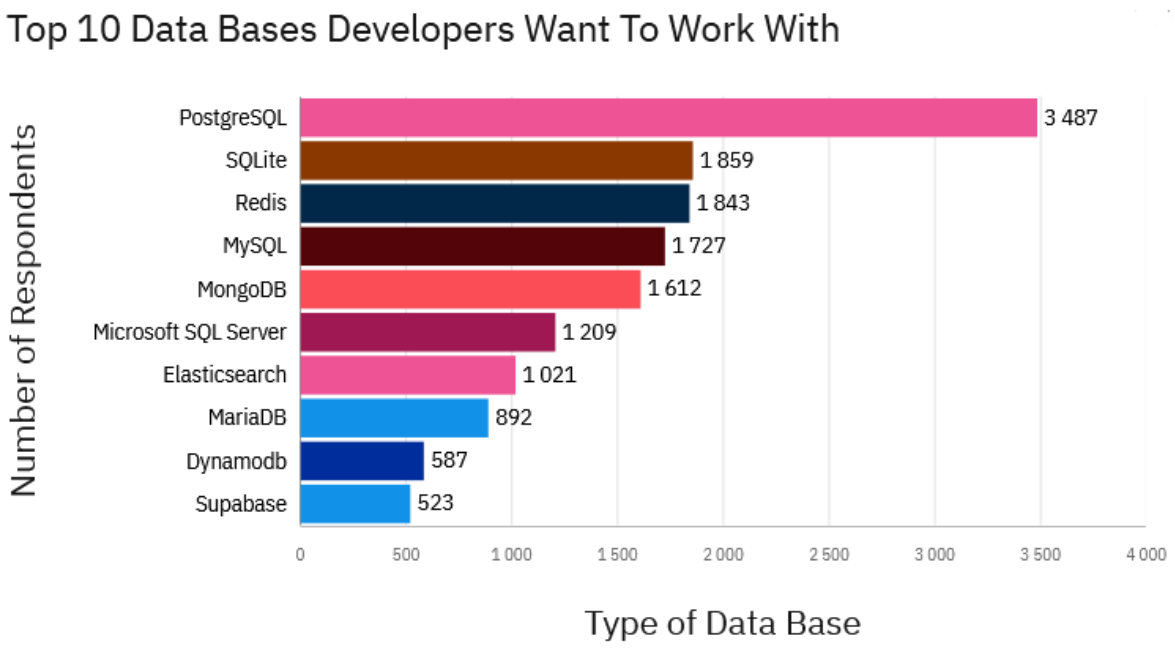
- Essential for full-stack and front-end development
- Shows developer interest, it’s a good opportunity to start learning it
- Consider focusing on newer or in-demand languages
- Useful for scalable and modern back-end development

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- PostgreSQL is #1 now and for next year
- Supabase enters the top 10
- Oracle drops from the future ranking
- Redis & SQLite are rising in popularity

Implications

- Valuable to learn for long-term career relevance
- Shows demand for modern, serverless-friendly platforms
- Its usage is declining, less strategic to focus on
- Great options for fast, simple, scalable development

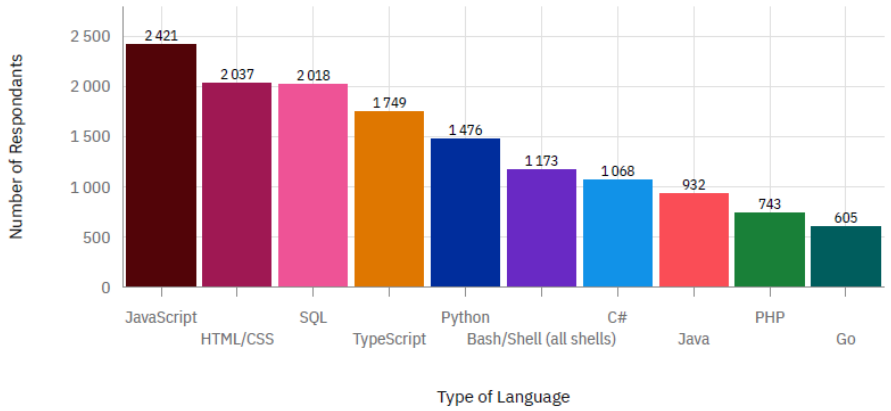
DASHBOARD

<Please present your dashboard in the following slides.>

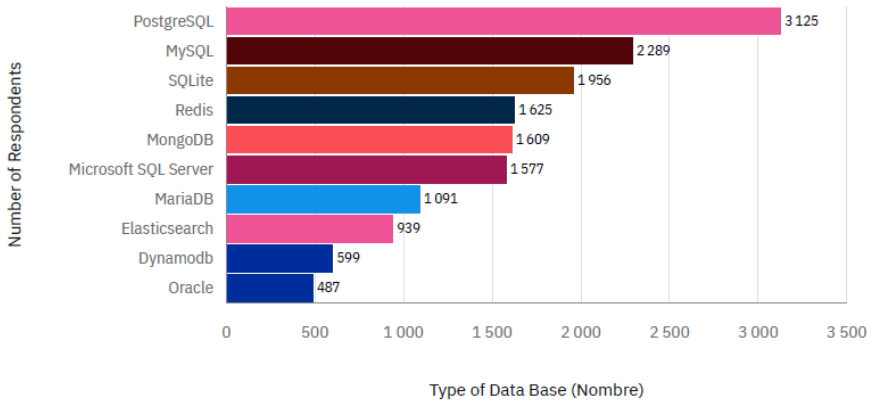
Current Technology Usage.

Current Technology Usage.

Top 10 Languages Developers Have Worked With

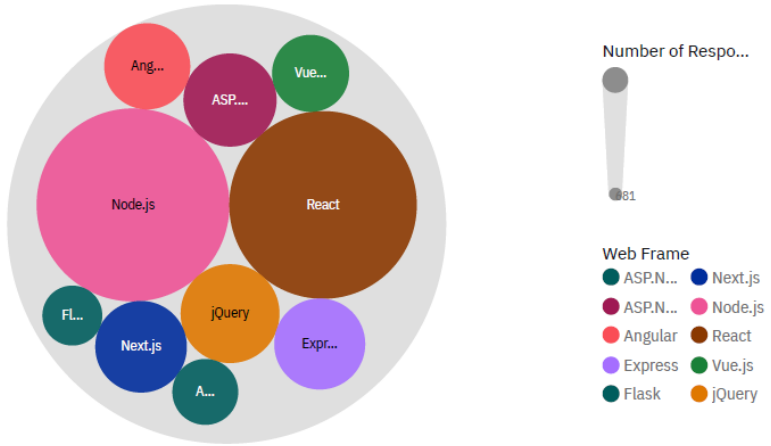


Top 10 Data Bases Developers Have Worked With

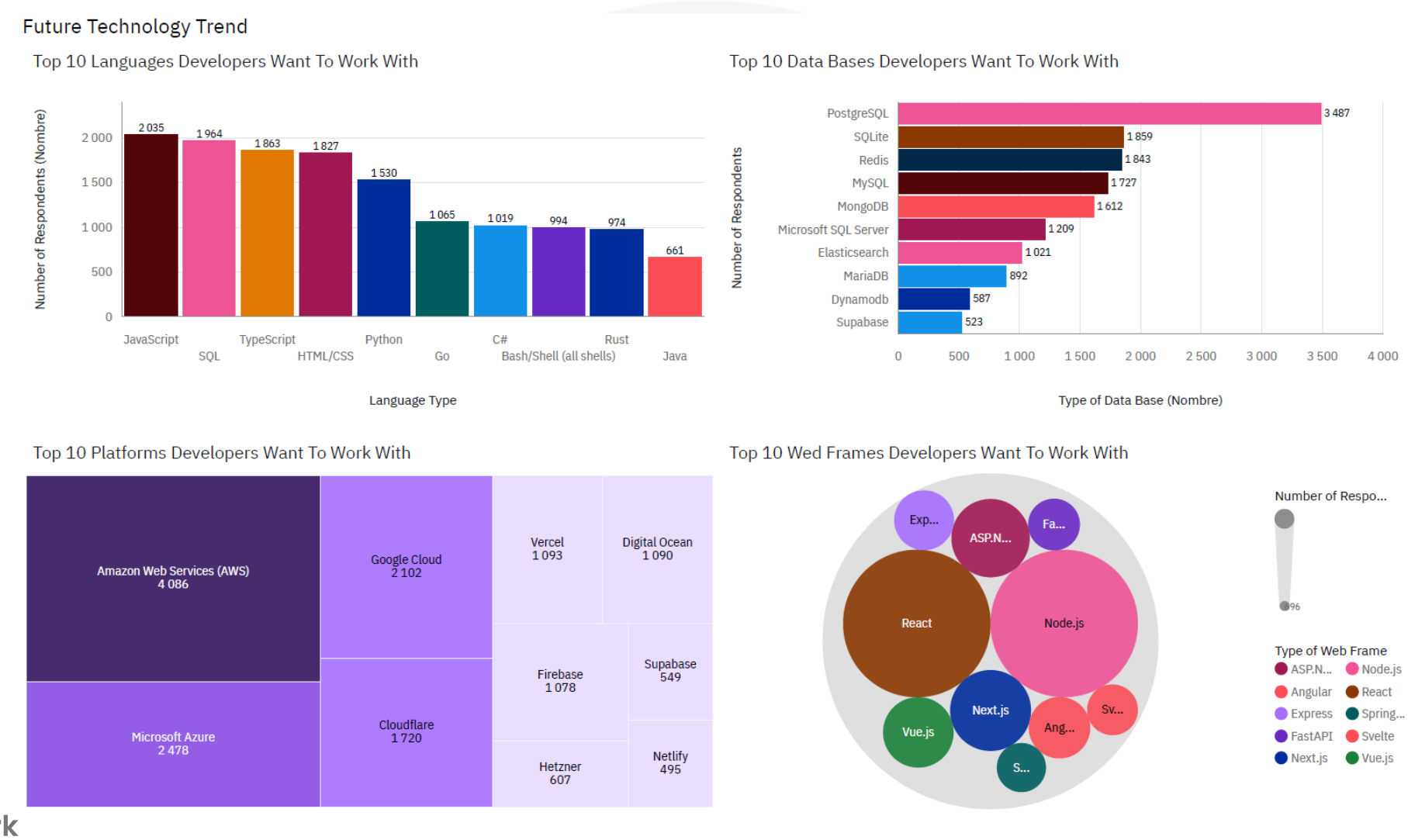


Top 10 Platforms Developers Have Worked With

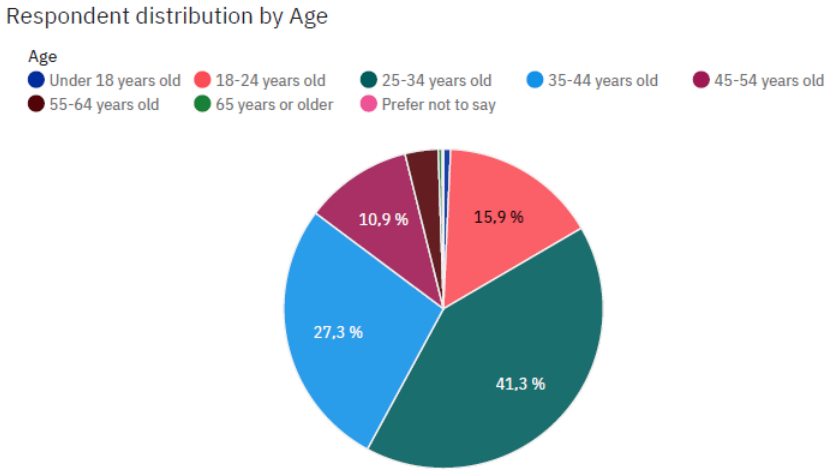
Top 10 Wed Frames Developers Have Worked With

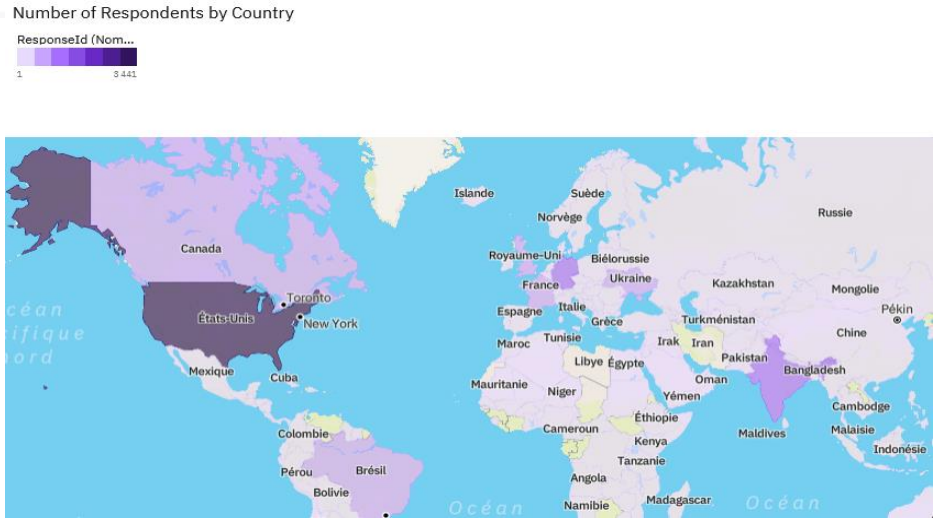


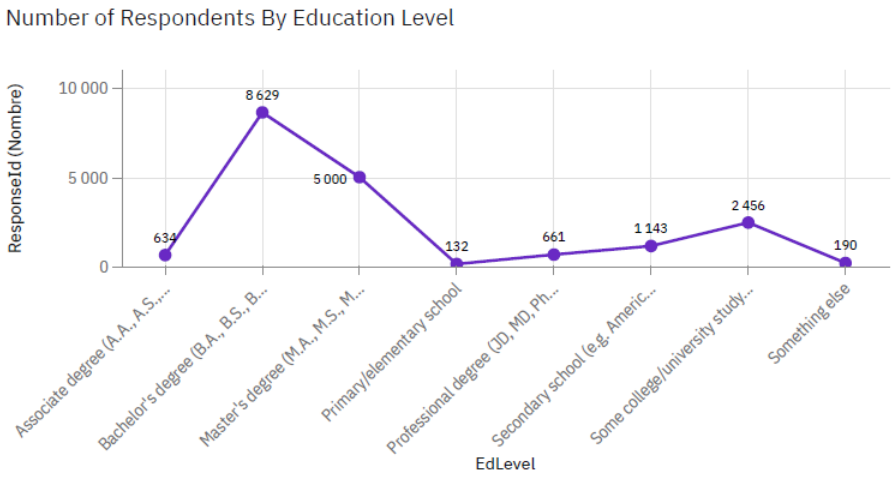
Future Technology Trend.

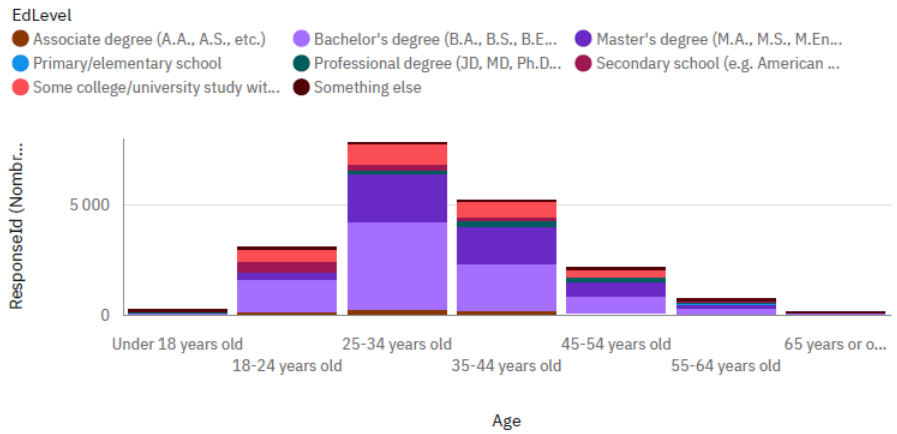


Demographics data.









DISCUSSION

OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript, TypeScript, and SQL dominate both usage and interest.
- PostgreSQL is the top database in use and demand.
- Cloud platforms like AWS, Azure, and Google Cloud remain top choices.
- Majority of developers are aged 18–34 with bachelor’s or master’s degrees.

Implications

- Learning JavaScript, SQL, and TypeScript is essential for employability.
- Companies should invest in PostgreSQL and modern frameworks like React/Next.js.
- Cloud skills are a must-have. Especially AWS and Azure.
- raining and hiring strategies should target the 18–34 age group.

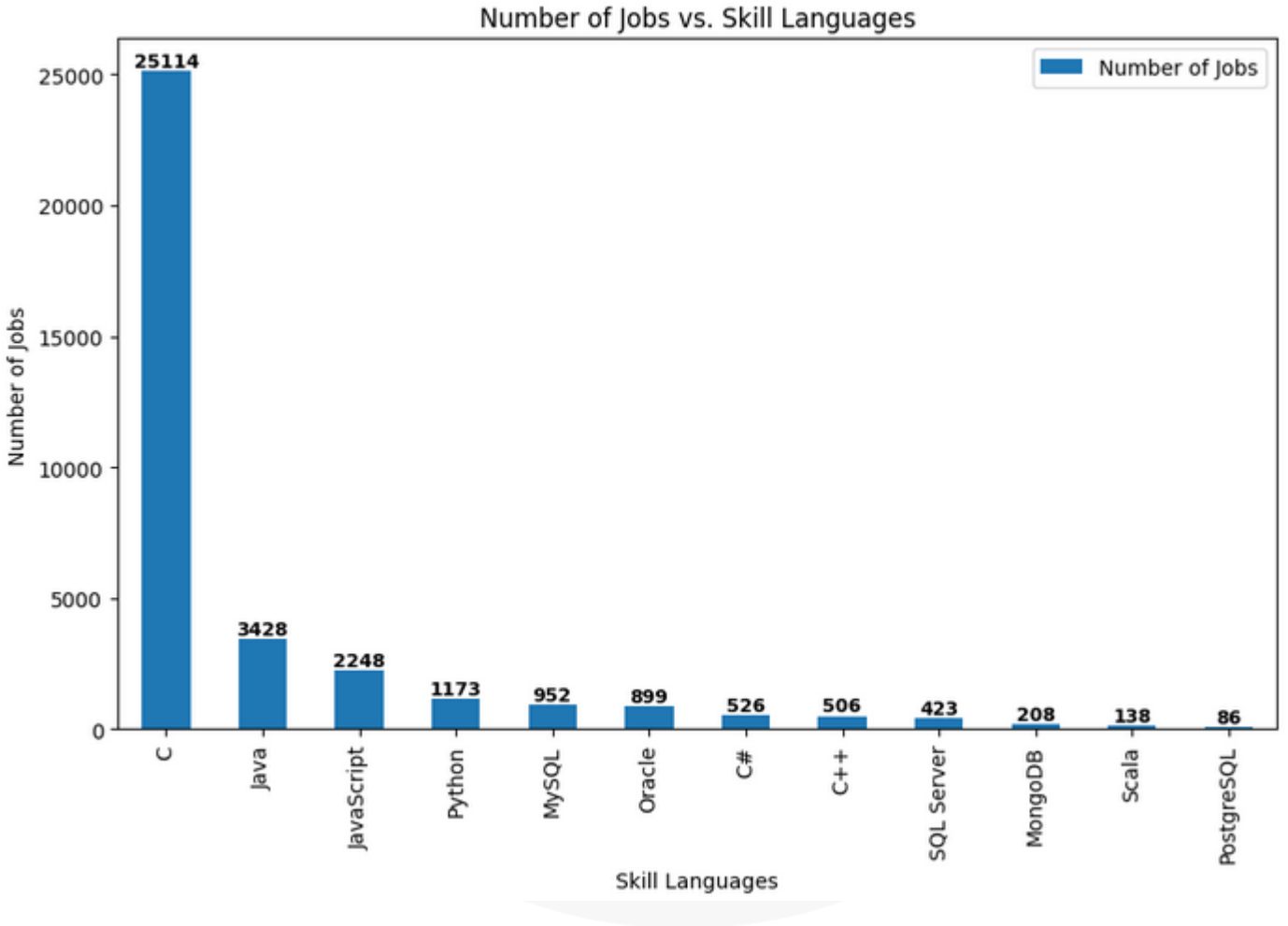
CONCLUSION

- Modern technologies dominate: JavaScript, TypeScript, React, and PostgreSQL are consistently leading in both usage and future interest.
- Emerging tools are gaining traction: Rust, Go, Supabase, and Next.js show strong upward trends
- Legacy tools are declining PHP, Oracle, and Java are losing appeal among developers, suggesting a shift in industry priorities.
- Cloud proficiency is key: Platforms like AWS, Azure, and Google Cloud are essential skills in today’s job market.
- Young and educated audience: Most developers are aged 18–34 and hold at least a bachelor’s

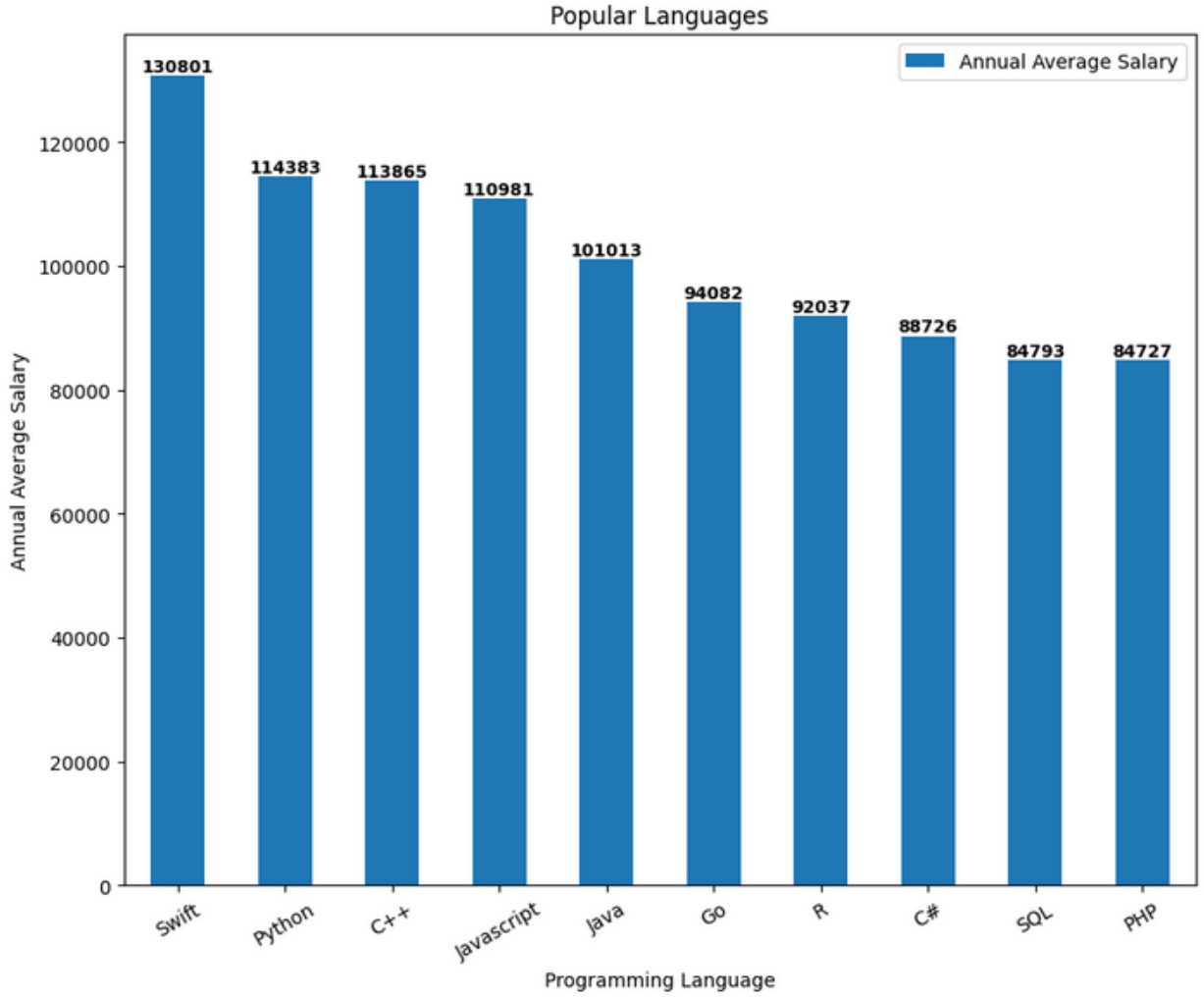
APPENDIX

- Include any relevant additional charts, or tables that you may have created during the analysis phase.

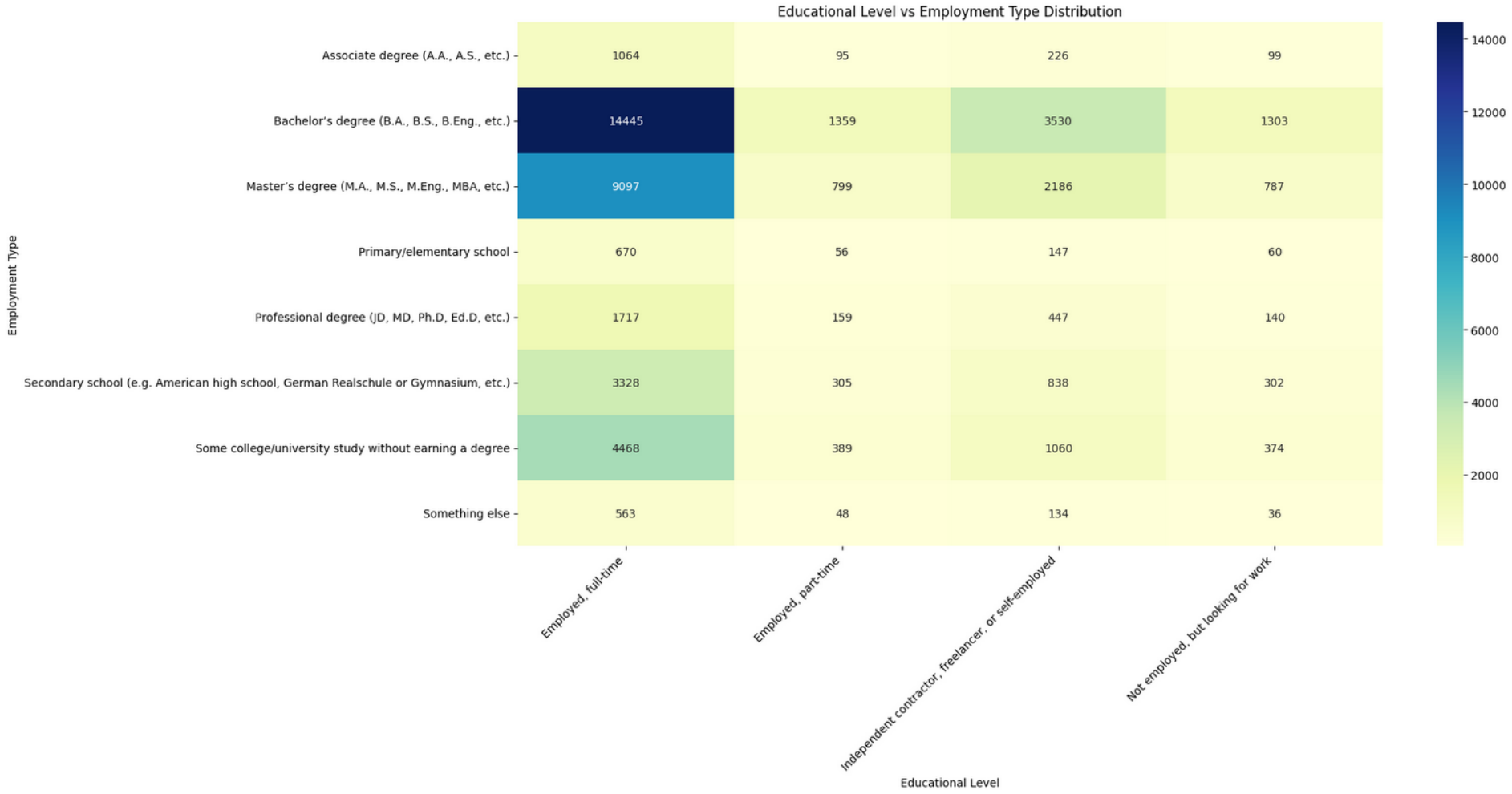
JOB POSTINGS



POPULAR LANGUAGES



Educational Level vs Employment Type Distribution



Database admired by Age group